## PATENT ABSTRACTS OF JAPAN

(11)Publication number:

51、・MANA、ANDLONGERONAS ANDLONGERONAS ANDLONGERONAS AND ANDLONGERON AND ANDLONGERONAS AND ANDLONGERONAS AND AND ANDLONGERONAS AND ANDLONG

2000-274851

(43)Date of publication of application: 06.10.2000

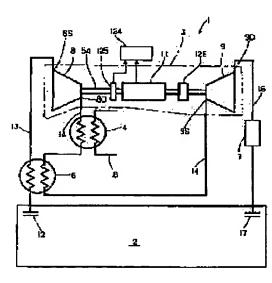
(51)Int.CI.

F25B 9/00

(21)Application number: 11-083796 (71)Applicant: SANYO ELECTRIC CO LTD

(22)Date of filing: 26.03.1999 (72)Inventor: MITSUNAGA TOSHIHIKO

## (54) AIR CYCLE TYPE COOLER



## (57)Abstract:

PROBLEM TO BE SOLVED: To efficiently continue operating even if air conditions are changed by connecting an expansion means to a rotary shaft of a motor through a transmission, and controlling a reduction gear ratio of the transmission in response to a torque of the shaft or an input of a motor driving element.

SOLUTION: A scroll fluid machine 3 in the air cycle type cooler 1 has a compressor 8 and an expansion unit 9. The compressor 8 is connected directly to one end of a rotary shaft 54 of a motor 11, and the unit 9 is connected to the other end of the shaft 54 through a continuously variable transmission 126. A sensor 125 for detecting a torque of the shaft 54 is

attached to the shaft 54, and an output of the sensor is input to a controller 124 together with data of an input value (power) of the motor 11. The transmission 126 is controlled so that, if a compression ratio of the compressor 8 is larger than that of the unit 9, a reduction gear ratio of the transmission 126 is reduced while, in its reverse case, the ratio is increased.